REMARKS

Claims 2-7 and 9-14 are pending in the present application. Claim 1 had been previously cancelled, and claim 8 had been withdrawn in view of a Restriction Requirement.

Claim Rejections – 35 U.S.C. § 103(a)

Claims 2-7 and 9-14 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over US 5,129,824 to Keller in view of US 5,993,784 to Hill and US 6,045,800 to Kim et al. (hereinafter "Kim") further in view of US 5,875,798 to Petrus. This rejection is respectfully traversed for the following reasons:

Independent claim 2, upon which all other claims depend, is directed to a self-treatment process for periodontal patients with gingival detachment of about 3 mm and greater comprising the step of physically removing biofilms on a daily basis from supragingival, interproximal and subgingival tooth surfaces and simultaneously controlling inflammation related substances associated with heart disease by **administering soft abrasives onto** a) supragingival tooth surfaces with toothbrushing, b) interproximal tooth surfaces with proxy brushing, and c) interproximal and subgingival surfaces with flossing.

Keller is directed to treatment of periodontal disease by administering a medicament such as an antimicrobial or antibiotic agent to an infected site below the gingiva using dental floss, an interdental toothbrush, a syringe, or a night time application tray (abstract). However, Keller does not teach or suggest self-treatment by administering soft abrasives onto supragingival tooth surfaces with toothbrushing. Keller in entirely directed to administering medicaments, not abrasives, to subgingival areas,

and does not teach treatment of supragingival tooth surfaces. Nor does Keller teach administering soft abrasives onto interproximal tooth surfaces with a proxy brush, or administering soft abrasives onto interproximal and subgingival surfaces with flossing. Keller does not recognize a connection between inflammation in periodontal disease and inflammation-related substances associated with heart disease.

Hill is directed to an abrasive, low foaming toothpaste used in conjunction with a channeled bristle toothbrush (abstract) to clean tooth surfaces contiguous to the gingival margin and to the interproximal surfaces (col. 3, lines 47-49). However, Hill does not mention any other method for cleaning the teeth, such as flossing or using a proxy brush, so Hill does not provide any suggestion or motivation to apply the disclosed soft abrasives to interproximal and subgingival tooth surfaces using a proxy brush or dental floss. The Examiner is of the opinion that Hill teaches brushing to control inflammation related to heart disease, but Hill only mentions treating inflammation related to gingivitis, and does not recognize a connection between gingivitis and heart disease.

Kim is directed to the addition of anti-inflammatory agents to an abrasive dentifrice to treat periodontal disease (abstract, col. 4, line 62 to col. 5, line 9). Kim generally discloses application of the dentifrice with a toothbrush (Experimental Example 1-6), but does not specify which tooth surfaces are brushed. Nor does Kim mention any other method for cleaning the teeth, such as flossing or using a proxy brush, so Kim does not provide any suggestion or motivation to apply the disclosed anti-inflammatory, abrasive dentifrice to interproximal and subgingival tooth surfaces using a proxy brush or dental floss, as recited in claim 7. Kim also does not provide any motivation to apply dentifrice loaded with antibacterial agents such as chlorhexidine gluconate, cetylpyridium chloride, and triclosan (col. 1, lines 54-57) to interproximal and subgingival tooth surfaces using a proxy brush or dental floss, as recited in claims 12 and 13. The Examiner is of the opinion that Kim teaches application of anti-inflammatory dentifrice

to control inflammation related to heart disease, but Kim only mentions treating inflammation related to periodontal diseases such as gingivitis and periodontitis (col. 1, lines 20-53), and does not recognize a connection between periodontal disease and heart disease.

The Examiner relies on Petrus for teaching that gingivitis and periodontal disease may predispose individuals to cardiovascular disease (col. 1, lines 9-18, col. 4, line 66 to col. 5, line 21). However, Petrus is directed to treatment of periodontal diseases with a medicated toothpick, which is not recited in the claims. Petrus mentions cleaning the outer, inner, and chewing surfaces of teeth with a toothbrush, and cleaning crevices between teeth with dental floss (col. 1, lines 60-67), but does not teach or suggest administering soft abrasives using these methods. Nor does Petrus teach or suggest administration of soft abrasives to interproximal tooth surfaces using a proxy brush. Petrus only teaches treatment of gingivitis and periodontal disease that may lead to cardiovascular disease, but does not teach or suggest treatment of a patient with heart disease using the methods recited in claims 14 and 7.

The Examiner relies on Kim and on the general knowledge of one of ordinary skill in the art to provide motivation to combine the above references. The Examiner also relies upon general knowledge of the skilled artisan for motivation to use two or three dental devices as recited more than once a day, or at least one device after every meal or snack. For the reasons submitted above, Kim fails to provide such motivation. In addition to the reasons submitted above, the skilled artisan would not be motivated to combine Keller, which teaches application of tetracycline with interdental brush or dental floss, Hill, which teaches application of low-foaming abrasive toothpaste with a channeled bristle toothbrush, Kim, which teaches application of anti-inflammatory dentifrice with a standard toothbrush, and Petrus, which teaches application of therapeutic agents (particularly zinc salts) with a toothpick, because these patents are

directed to distinct and separate methods and devices. The Examiner does not provide rationale for why the skilled artisan would be motivated to administer a soft abrasive using each of a toothbrush, a proxy brush, and dental floss on a daily basis, as recited in claim 2, nor using each of these dental devices more than once a day, as recited in claim 10. Due to the inconvenience of using each of as many as three dental devices one or more times a day, the skilled artisan would not be motivated to arrive at the methods as claimed. Applicants' claims are in fact, contrary to the normal usage of dental devices – which is typically limited to one device, often only once a day (or less often). Here, Applicants are teaching and claiming a regimen that is something quite different – to correct severe gingival detachment – defined as ***about 3 mm or more***.

For the foregoing reasons, claims 2-7 and 9-14 are not obvious over Keller, Hill, Kim, and Petrus. Accordingly, Applicants respectfully request reconsideration and withdrawal of the 35 U.S.C. § 103(a) rejection and allowance of claims 2-7 and 9-14.

TIME EXTENSION REQUEST

Applicant respectfully requests a two-month extension of time for the filing of this response. The original deadline was September 2, 2006. This response is being filed on or before November 2, 2006.

FEE AUTHORIZATION

Please charge all fees due in connection with this filing to Deposit Account No. 19-0733.

Respectfully submitted,

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